



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/551,853

09/21/2006

Gerd Scheffel

2802-897-001 US

6150

24045 7590 11/26/2008
PARKER-HANNIFIN CORPORATION
HUNTER MOLNAR BAKER MORGAN
6035 PARKLAND BOULEVARD
CLEVELAND, OH 44124-4141

EXAMINER

WASHBURN, DOUGLAS N

ART UNIT

PAPER NUMBER

2863

MAIL DATE

DELIVERY MODE

11/26/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,853	Applicant(s) SCHEFFEL, GERD	
	Examiner DOUGLAS N. WASHBURN	Art Unit 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 16 is/are rejected.
- 7) ☒ Claim(s) 10-15 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1 The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

Further, the listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. In particular WO02/41332 A1.

Drawings

2 The drawings are objected to because stray markings in figure 1 make the drawing unclear; Further lead lines 12 and 21 in figures 3 and 4 appear to be directed to the same element.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-9 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Mast et al. (US 7,363,819) (Hereafter referred to as Mast 819).

Mast 819 teaches:

Regarding claim 1, A system for detecting and transmitting test data from a housing (10) (a pressure sensor housing; column 2, line 12) comprising a pressure chamber (11) (pressure channel section 51; column 2, line 25; figure 1, element 51) that is filled with a high-pressure fluid (A device for measuring pressure, in particular for measuring high pressure; abstract, lines 1 and 2) and is homogeneously pressurized via printed conductors (21) (printed conductors 72 ; column 2, line 67; figure 2, element 72) connected to a sensing element (23) (semiconductor pressure sensor 10; column 2, line 14; figures 1 and 2, element 10) situated in the pressure chamber (11) (figure 1, element 51) and are guided out of the housing (10), a circuit board (12) (printed-circuit board 7; column 2, line 65; figures 1 and 2, element 7), both faces of which being subjected to the pressure prevailing in the pressure chamber (11) (figures 1, 3, 4 and 5) and at least one portion (30) of which extending out of the housing (10) (Electric terminal elements 8 are introduced to the inside of sensor housing 1 through second sensor housing part 2 and electrically connected to printed-circuit board 7; column 3, lines 57-59), being situated inside the pressure chamber (11) as a support for the strip conductors (21) and the housing (10) that encloses the pressure chamber (11) being separated in the plane of the circuit board (The top, provided with printed

Art Unit: 2863

conductors 72 and electronic components, of the printed-circuit board placed on the punch bent part is situated approximately in the same plane as the top of pressure sensor 10; column 2, line 66 et seq; column 3, line 1-3) and the faces of the housing halves (13, 14) (figures 1 and 2, elements 2 and 3) clamping the circuit board (12) between them in such a way that radial forces exerted within the circuit board are absorbed when pressure is applied (A section of connecting part 6 extending radially inward forms a platform 67 for placement of a printed-circuit board 7, which is electrically conductively connected to pressure sensor 10 via bonding wires; column 2. lines 63-66);

Regarding claim 2, the housing halves (13, 14) hold the circuit board (12) by a frictional connection (A sealing adhesive 66 or a sealing ring may seal the connecting area of connecting part 6 and first sensor housing part 2 if this is desirable for sealing the sensor housing from the surrounding outside area; column 3, lines 50-53);

Regarding claim 3, the housing halves (13, 14) hold the circuit board (12) by a positive connection (Support 5, on which pressure sensor 10 is situated, reaches through an opening 71 in the printed-circuit board and a central opening 68 in connecting part 6, as is best viewed in FIG. 2. Connecting part 6 may, however, also be designed without platform 67 and with an opening 68 of a larger diameter. In this case, printed-circuit board 7 may be placed on internal surface 33 of sensor housing part 3 with a spacer between them, for example; column 3, lines 3-11);

Regarding claim 5, the one housing half (14) encompasses opposite facing other housing half (13) externally via an axially projecting flange (16), an external edge area of the circuit board (12) being in contact with an inside of the flange (16) (To attach the first sensor housing part to the second sensor housing part a circumferential, such as a circular section of the connecting part is welded to a surface of the first sensor housing part; column 1, lines 45-48);

Regarding claim 6, the flange (16) has a cutout (17) extending across a limited circumferential portion, which is penetrated by a projection (30) extending outwardly from the circuit board (12) (the connecting part may be attached to the second sensor housing part using a flange. In addition, a circumferential groove, which engages the front face of a circumferential housing wall of the second sensor housing part, is formed on the connecting part; column 1, lines 49-53);

Regarding claim 7, seals (18) are situated between the faces (15) of the housing halves (13, 14) which clamp the circuit board (12) and the surfaces of the circuit board (12) (A sealing adhesive 66 or a sealing ring may seal the connecting area of connecting part 6 and first sensor housing part 2 if this is desirable for sealing the sensor housing from the surrounding outside area; column 3, lines 50-53);

Regarding claim 8, the circuit board (12) has a recess (19) used to equalize pressure between sub-chambers (11a, 11b) of the pressure chamber (11) located on both sides of the circuit board (Terminal elements 8 and, optionally, passages connect the inside of the housing to terminal 23 of the sensor via recesses 65b in bottom 65a of the connecting part. The pot-shaped design of connecting part 6 provides an excellent EMC (electromagnetic compatibility) protection for the electronic analyzer components situated on printed-circuit board 7; column 4, lines 38-44);

Regarding claim 9, the circuit board is designed to accommodate a position measuring system and a position pickup coil (23) being situated in the recess (19) and connected to the printed conductors (21) located on the circuit board (12), the position pickup coil (23) lying in the fluid located in the pressure chamber (11) surrounding a position pickup core (25) which is axially movable through the recess (19) of the circuit board (12) and the position pickup coil (25) (Connecting piece 4 is designed as a threaded connecting piece and is welded to outside 32 of a metallic first sensor housing part 3 as a separate component, connecting piece 4 covering a central passage 31 in

Art Unit: 2863

first sensor housing part 3. Using connecting piece 4, the device may be fastened in a cutout provided with a mating thread. The approximately cylindrical support 5 has a smaller diameter than passage 31. On a side of support 5 facing away from semiconductor pressure sensor 10, there is a connecting piece 52, in whose center first pressure channel section 51 enters. The side of connecting piece 4 facing passage 31 has a circumferential collar 42, which is circumferentially situated on this side around a second pressure channel section 41 in connecting piece 4; column 2, lines 31-44);

And regarding claim 16, detecting the longitudinal movements of a valve piston movable in hydraulic valves (figures 1, 3, 4 and 5).

Claim Rejections - 35 USC § 103

4 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mast as applied to claim 1 above and further in view of Ishimura (US 3,715,443) (Hereafter referred to as Ishimura).

Mast is silent regarding

Regarding claim 4, the circuit board (12) is made from a hard plastic.

Ishimura teaches:

Art Unit: 2863

Regarding claim 4, the circuit board (12) is made from a hard plastic (printed circuit board made of such insulating material as synthetic phenol resin(trade name: Bakelite); column 4, lines 34-36).

It would have been obvious to one of ordinary skill in the art to modify the teaching of Mast of a printed circuit board with the teaching of Ishimura of a printed circuit board made bakelite because a printed circuit board made bakelite would have aided in insulating the board.

Allowable Subject Matter

5 Claims 10-15 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Claim 10 recites, in part, "a wire winding (32) of the position pickup coil (23) which is located on a coil frame (31) is spray coated with a suitable material". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

Claims 11 and 12 depend from claim 10.

Claim 13 recites, in part, "sensor that detects a change of length of the circuit board (12) is situated on the circuit board (12)". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

Claims 14 and 15 depend from claim 13.

Claim 17 recites, in part, “a coil frame movable through magnetic loading in a magnetic cylinder having a sequence of permanent magnets and pole discs in a magnetically conductive housing”. This feature **in combination with the remaining claimed structure** avoids the prior art of record.

It is these limitations, which are not found, taught or suggested in the prior art of record, and are recited in the claimed combination that makes these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

6 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas N. Washburn whose telephone number is (571) 272-2284. The examiner can normally be reached on Monday through Thursday 6:30 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Drew A. Dunn can be reached on (571) 272-2312.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 2863

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward R. Cosimano/
Primary Examiner, Art Unit 2863

DNW